UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

MEMORANDUM

DATE: 6/25/2019

SUBJECT: Science review of product performance to add water soluble packaging instructions as a sublabel to registered product, METALARV S-PT Mosquito Growth Regulator Pellet, containing 4.25 % w/w of S-Methoprene as active ingredient. PRIA category (B680).

Decision Number: 547672
DP Number: 450708
Submission Number: 1029758
EPA Reg. No.: 73049-475
Active Ingredient Type: Biochemical
PC Code: 105402
CAS Number: 65733-16-6
Active Ingredient Tolerance/Exemption: N/A
MRID Number(s): 507585-01

FROM: Clara Fuentes, Ph.D., Entomologist
Risk Assessment Branch
Biopesticides & Pollution Prevention Division (7511P)

CLARA FUENTES Digitally signed by CLARA FUENTES Date: 2019.06.25 17:04:56 -04'00'

THROUGH: Eric Bohnenblust, Ph.D., Senior Biologist
Emerging Technologies Branch
Biopesticides & Pollution Prevention Division (7511P)

ERIC BOHNENBLUST Digitally signed by ERIC BOHNENBLUST Date: 2019.06.25 15:56:24 -04'00'

TO: Menyon Adams, Regulatory Action Leader
Biochemical Pesticides Branch
Biopesticides & Pollution Prevention Division (7511P)

ACTION REQUESTED

Valent BioSciences, LLC. is requesting review of product performance data in MRID 507585-01 in support of label amendment to add water soluble packaging instructions as a sublabel to registered product, METALARV S-PT Mosquito Growth Regulator Pellet Spherical Pellets (EPA Reg. 73049-475).

COMMENTS, RECOMMENDATIONS and CONCLUSIVE REMARKS

MRID 507585-01 is unacceptable**.**

- Data in MRID 507585-01 do not support efficacy against all mosquito species listed on the product label (*Aedes*, *Ochlerotatus*, and *Psorophora* spp., (adult floodwater mosquitoes) and *Anopheles, Culex*, *Culiseta*, *Coquillettidia*, and *Mansonia* spp (adult standing water mosquitoes), because only 2 species, *Culex pipens* and *Culex quinquefasciatus,* within 1 genus were tested. Data should be submitted on mosquito species within the genera *Aedes* and *Anopheles*.

- To account for actual rate of product application within the study, the surface area of catch basins used for testing should be reported.

- Environmental conditions during testing should be reported.

- It is stated in the study report that the catch basins were naturally infested and that the presence and density of larvae, live pupae, dead pupae and exuviae were monitored for 133 and 131 days post application in street basins and simulated basins tests, respectively. The study report should provide sampling data for treatments applied to street and simulated basins. That is, data on late instar larvae, exuviae, live and dead pupae from street basins test that were counted at each sampling interval on days 3, 7 and then weekly until 25 weeks (175 days) post treatment (as stated on the test protocol) should be reported per treatment replicate.

- Results from statistical analysis, including mean values with their associated standard error, should also be reported.

CONCLUSIONS:

The submitted data are unacceptable and the claimed efficacy interval of 105 days is not supported by the data. However, the WSP formulation is applied at 18 g/200 ft^2 (approx. 8.62 lb/acre) and is considered the same as the regular pellet formulation. Therefore, the previously registered use sites (listed on sublabel A) at the proposed rate (18 g/200 ft^2) for the WSP

formulation are acceptable for efficacy against all currently labeled species (listed on sublabel A) for up to 42 days post application.

For claims the product shows efficacy for up to 105 days post application, the registrant would need to submit acceptable data for Anopheles, Culex, and Aedes mosquito species. For more information on specific species please see: https://www.epa.gov/pesticide-registration/guidance-efficacy-testing-pesticides-targeting-certain-invertebrate-pests.

SUMMARY OF SUBMITTED STUDIES

MRID 507585-01.

The study report is a summary of 2 field tests using street catch basins and simulated catch basins to evaluate residual efficacy of METALARV S-PT Mosquito Growth Regulator Pellet Spherical Pellets against larvae of *Culex pipens* and *Culex quinquefasciatus.* The product was compared to negative control treatment and to treatments with VBC-50553 and VBC-60555 (Altosid XR (2.1 % S-methoprene (EPA Reg. No. 2724-421). All treatments in the street catch basins were replicated 10 times, and 5 times in the simulated catch basin test. Street basins were monitored for 19 weeks post treatment for density of larvae, live and dead pupae. Simulated basins were monitored for 131 days for presence of pupae and exuviae. Pupae from both tests on all sampling weeks were collected and held for evaluation of emergence inhibition. Percent emergency inhibition (% EI) was calculated according to the formula:

% EL = 1-(total of emerged adults/ total of isolated pupae).

Results are summarized in Table 1.

Table 1 – Emergence inhibition of VBC-60554 WSP over time in two studies.

Test No.	VBC Report Reference	Species	Test Conditions	Average %EI over time (days)	Days until %EI <95% was first observed
1	2018PDECH001	*Culex pipiens*	Street Basins	94% (99 days)	82 days
2	2018PDECH005	*Culex quinquefasciatus*	Simulated Basins	97% (105 days)	63 days